

REMARKS

Applicants appreciate the Examiner's thorough consideration provided in the present application. Claims 1-40 are currently pending in the instant application. Claims 2, 20 and 23 have been amended. Claims 1, 5, 14, 20, 23, 24, 25, 26, 28 and 37-39 are independent. Reconsideration of the present application is earnestly solicited.

Allowable Subject Matter

Applicants appreciate the Examiner's indication of allowable subject matter. Specifically, the Examiner has indicated that claims 25 and 38 have been allowed. In addition, the subject matter of claims 20, 23, 32, 33 and 35 has been indicated as being allowable if rewritten in independent format. In light of the foregoing amendments to the claims, claims 20 and 23 should be allowed as indicated by the Examiner. Applicants submit that the remaining claims are also allowable as discussed in greater detail hereinafter.

Claim Rejections Under 35 U.S.C. § 102

Claims 1, 3, 9, 11 and 28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Seitz (U.S. Patent No. 1,617,423). Claims 1-3, 9, 11, 14, 17, 26-30, 39 and 40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sasaki (U.S. Patent No. 5,769,532). These rejections are respectfully traversed.

In light of the foregoing amendments and following remarks, Applicants submit that these rejections have been obviated and/or rendered moot. Applicants submit that the prior art of record fails to teach or suggest each and every limitation of the unique combination of elements of the claimed invention(s) of claims 1, 5, 14, 24, 25 and 26. For example, the prior art of record fails to teach or suggest a position light having "a prism having an input face, an output face, and a transflective face to receive, distribute and direct light emitted by said light source." With respect to claims 28, 37 and 39, the prior art of record does not teach or suggest a process for providing position lighting for an aircraft that relies upon a prism having a transflective face, an output face and an input face. Accordingly, these rejections should be withdrawn.

As discussed on pages 2-3 of the present application, the present inventors have acknowledged that prisms may be used to direct and diffuse light. For example, Applicants discuss U.S. Patent No. 4,161,770 (Maurer) as an example of a guide signal device that relies upon a prism, e.g., "light emitted from the source undergoes total internal reflection before emerging at one of the surfaces of the prism." However, the system of Maurer and the prior art of record relied upon by the Examiner does not teach how to utilize both direct light emission and total internal reflection to produce the necessary sharp angular cutoff and the asymmetric lighting pattern needed for aircraft position

lights. The unique combinations of elements of the claimed invention of claims 1, 5, 14, 24, 26, 28, 37 and 39 do provide this advantageous effect.

Accordingly, Applicants submit that even if the alleged components of Seitz and/or Sasaki were prisms, these devices fail to teach or suggest a prism having a transflective face. As described on pages 4-5 of the present application, light reflected from a "transmissive-reflective ("transflective") face of the primary prism is directed by an output face of the primary prism in the direction of flight of the aircraft when the aircraft position light is mounted as a wingtip light. This type of prism in conjunction with a predetermined positioning of the light source results in an arrangement that utilizes total internal reflection to provide a sharp angular cutoff of the light where it is needed to meet regulatory requirements for aircraft lighting.

Applicants submit that the term transflective is a term of art that would be readily appreciated by one of ordinary skill in the art. Further, it does not appear that the Examiner has identified a surface that is transreflective as defined in the specification and/or understood by one of ordinary skill in the art. Accordingly, these rejections should be withdrawn.

For example, with respect to the prism (element K) of Seitz, clearly this prism relies upon the basic operation of a prism, e.g., the bending of light based on the change in density of the material and/or the angular surface of the prism that the light is passing through. However, the Examiner does not appear to have identified any surface that is transflective within the structure

of the prism (element K) of Seitz. Similarly, with respect to the Sasaki reference, the Examiner has not identified a transflective surface on element 3, even if element 3 could properly be construed as a prism. For instance, a transflective surface offers many compromises or aspects of both reflective and transmissive surfaces. For example, a transflective surface may permit a transmission of backlighting while simultaneously reflecting ambient light, e.g., such as in a transflective LCD display.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

As to the dependent claims, Applicants respectfully submit that these claims are allowable due to their dependence upon an allowable independent claim, as well as for additional limitations provided by these claims.

Claim Rejections Under 35 U.S.C. § 103

Claim 4 stands rejected stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sasaki in view of Roney et al. (U.S. Patent No. 5,528, 474). Claims 5-8, 10, 12 and 13 stand rejected stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sasaki in view of Waltz et al. (U.S. Patent No. 5,450,301). Claims 1-3, 5-10, 14, 15, 17, 24, 26-29, 36, 37, 39 and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shaw et al. (U.S.

Patent No. 6,419,372) in view of Kalmanash (U.S. Patent No. 5,211,463). Claims 16, 18, 19, 21, 22, 31 and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shaw et al. in view of Kalmanash, and further in view of Yamada et al. (U.S. Patent No. 5,704,703). These rejections are respectfully traversed.

In light of the foregoing amendments to the claims, this rejection has been obviated and/or rendered moot. As discussed in greater detail hereinabove with reference to the rejections under 35 U.S.C. § 102, Applicants submit that the prior art of record fails to teach or suggest each and every element of the unique combination of elements of claims 1, 5, 14, 24, 26, 28, 37 and 39. Accordingly, these rejections should be withdrawn.

Specifically, the prior art of record fails to teach or suggest the use of a prism having an input face, an output face and a transflective face. Although the Examiner has identified a prism in the Sasaki reference, this reference does not appear to teach or suggest anything that would support the Examiner's position that this prism (element 3 in Sasaki) includes a transflective face. Since the alleged combinations of the prior art of record fail to teach or suggest each and every element of the claimed invention of even the independent claims, these rejections appear improper. Accordingly, the rejections to claims 4, 5-8, 10, 12 and 13 and based on the Sasaki reference under 35 U.S.C. § 103(a) should be withdrawn.

With respect to the Examiner's rejections based upon the Shaw et al. reference (U.S. Patent No. 6,419,372), Applicants respectfully submit that these rejections appear improper. Specifically, Applicants submit that the alleged combinations of the prior art of record fail to teach or suggest the use of a prism having a transflective face. As described in greater detail hereinabove, this unique feature of the claimed invention results in advantages heretofore not exhibited by the prior art of record. Accordingly, this rejection should be withdrawn.

Specifically, the alleged prism(s) of Shaw et al. are actually (elements 150 and 250) optical wedges and/or optical wave guides. For example, even if the optical wedge (element 150) is a prism, there is no mention or suggestion of this element having a transflective surface. With respect to the alleged second prism (element 250 as identified by the Examiner), this appears to be an optical wave guide that relies upon a structure for guiding light waves by constraining the travel of the light along a certain desired path. However, any "total internal reflection" (TIR) achieved by an optical wave guide typically occurs when light is incident on a dielectric interface, e.g., in the Shaw reference (col. 3, lines 3-15), the backlight 210 includes "wave-guide 250 positioned directly in front of array 220 of LEDs and optionally mounted to and supported by the same structure which supports the array 220. Between center portions of optical wave-guide 250 and LED array 220 is optical coupling medium 255, such as air. Optical wave-guide 250 both acts as a diffuser for evenly distributing light from

primary mode LEDs 225, and as a NVIS mode light wedge for distributing light from NVIS LEDs 230 at the edges of wave-guide 250." Therefore, Applicants submit that the optical wave guide (element 250) of Shaw is clearly not a prism having a transflective face. Accordingly, the rejections based upon this reference should also be withdrawn.

In accordance with the above discussion of the patents relied upon by the Examiner, Applicants respectfully submit that these documents, either in combination together or standing alone, fail to teach or suggest the invention as is set forth by the claims of the instant application.

Accordingly, reconsideration and withdrawal of the claim rejection are respectfully requested. Moreover, Applicants respectfully submit that the instant application is in a condition for allowance.

CONCLUSION

Since the remaining patents cited by the Examiner have not been utilized to reject the claims, but rather to merely show the state-of-the-art, no further comments are necessary with respect thereto.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

Attached hereto is a marked-up version of the changes made to the application by this Amendment.

In the event there are any matters remaining in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Version with Markings to Show Changes Made

MARKED-UP VERSION OF AMENDMENTS**IN THE CLAIMS:**

The claims have been amended as follows:

2. (Amended) The position light of claim 1 wherein a first portion of the light [to] emitted from said light source undergoes total internal reflection at said transreflective face of said prism and a second portion of the light emitted from said light source is transmitted through said transreflective face, the combination of said first and second portions of light producing a lighting pattern with a sharp angular cutoff corresponding to the critical angle for said total internal reflection at said transreflective face.

20. (Amended) A position light for use on an aircraft, comprising:

a housing structure;

at least one light source arranged inside said housing structure;

a prism having an input face, an output face, and a transreflective face to receive, distribute, and direct light emitted by said light source, said light source being located externally to said prism;

a lens through which emitted light passes, wherein said lens is engaged with the housing structure and light emitted by said light source is capable of passing through said lens; and

a second prism within said housing structure having an input face, an output face, and a transreflective face to further shape and direct the light

emitted by said light source, said second prism [The position light of claim 17,] further including facets on [all] said faces of said second prism.

23. (Amended) A position light for use on an aircraft, comprising:

a housing structure;

at least one light source arranged inside said housing structure;

a prism having an input face, an output face, and a transreflective face to receive, distribute, and direct light emitted by said light source, said light source being located externally to said prism; and

a lens through which emitted light passes, wherein said lens is engaged with the housing structure and light emitted by said light source is capable of passing through said lens, said prism [The position light of claim 21,] further including facets on all faces of said prism.